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University of Nebraska at Omaha  
Education Sector Support Project

A Brief Description  
of the

MANPOWER TRAINING PROGRAM  
(MTP)

October 1990  
Peshawar, Pakistan

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# **MANPOWER TRAINING PROGRAM**

## **(MTP)**

### **INTRODUCTION:**

The objective of the Manpower Training Program (MTP) is to provide basic office/administrative and vocational skills to Afghans in support of planning and administering Afghan resettlement and rehabilitation efforts. The strategy is to provide short term, transportable skill training in high need vocational areas which are performance based and job specific. The training provides for an integrated classroom and on-the-job training approach.

The preliminary work for the program began on 1 April 1989. A need confirmation survey, development of a curriculum, and recruitment of staff were completed by August 1989.

A site for developing the first Training Center was selected in Peshawar and a few shops were constructed.

The first group of students started their classes at M.T.P Peshawar on 7 September 1989 and the program officially came into existence. A second MTP training center was inaugurated in June 1990 in Quetta.

### **TEACHING MATERIALS:**

Some textbooks and other reading materials related to the core curriculum were provided through the University of Nebraska at Omaha and the Metropolitan Community Collage of Omaha, Nebraska. Selected topics were translated into Dari-Pashtu by the instructors and circulated in the form of lecture notes to the students.

These materials after being tested, improved and edited will be printed as textbooks for the MTP.

### **STUDENTS:**

A policy was adopted to provide equal opportunity to Afghans of all parties and provinces to participate in the entrance examination. Among the candidates, those with the highest grades are admitted to the program.

A level of high school graduate is required for the business programs and middle school graduate for the trade skills program.

### IN-SERVICE TRAINING:

An experimental in-service training program for the staff of the ministries of Afghan Interim Government (AIG) was started in MTP Peshawar in September 1990.

The main objective of this program is to upgrade the skills of the AIG employees' in office management and financial management areas.

A group of 48 employees from six ministries of AIG were enrolled in the first cycle of the program. The classes begin after regular MTP classes and AIG office hours, with a six day/week and 4 contact hour/day schedule. Each cycle of the in-service training program lasts for 16 weeks.

A modified version of MTP's business program curriculum has been adapted for the in-service training program. Teaching materials, labs, equipment, and classrooms of MTP are used for the program.

### CLASSROOMS AND OTHER FACILITIES:

Approximately one acre of land located in University Town, Peshawar, has been leased rent free for 5 years for the facilities needed for the M.T.P. At the end of the 5 year period, the developed property will be transferred back to the landlord free of charge.

All of the trade skill shops and classrooms, plus computer lab and typing lab, kitchen, bathrooms, administrative office, lunch hall and stores are built on this property.

Most of the MTP construction was done as part of the practical training program of the trade skills students.

MTP Quetta is developed on land belonging to the Ministry of Education/AIG in the Satellite Town of Quetta. All shops and classrooms were constructed as student work projects in conjunction with the practical training program.

## CONTENTS OF THE ACADEMIC PROGRAM:-

Based on a survey of the potential needs for the skilled personnel in post war Afghanistan, two academic programs were identified to be offered:

- I. Business Program
- II. Trade Skills

The training program was designed in 24 week cycles. Each cycle was divided in 2 quarters of 12 weeks each. Throughout a cycle, each student is given over 860 contact hours of classroom and practical training in each section of the program.

### I. BUSINESS PROGRAMS:

This section is divided in two sub sections:

- 1. Office Management
- 2. Basic Accounting

The core curriculum of each section is:

- a, Office Management:
  - Office Management and Secretariat
  - Communication
  - Mathematics
  - Typewriter/Computer
- b, Basic Accounting:
  - Book Keeping and Accounting
  - Communication
  - Mathematics
  - Typewriter/Computer

In addition to the above areas, courses in Theology and English Language are also taught to both sections. Course of studies for this section are as follows:

1. Office Management Option:

Course No	Course Title	Total Contact Hrs/week	Total Class Contact	Total Lab. Contact	Total Contact Hrs/12 Week
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First three-months (first quarter)

110	Communication	6	6	-	72
110	Basic Mathematics	4	4	-	48
110	Electronic Calculators	4	2	2	48
120	Beginning Typewriting	16	2	14	192
140	Record Management	10	5	5	120
101	English I	6	6	-	72
100	Theology	2	2	-	24

Second three-months (second quarter)

230	Advanced Typing	10	2	14	192
250	Office Procedures	8	4	4	96
210	Office Application at Micro computer	4	1	3	48
200	Theology	2	2	-	24
201	English II	6	6	-	72
210	Cooperative Work experience	12	Practice in Gov. offices		

## 2. Basic Accounting Option:

Course No	Course Title	Total Contact Hrs/week	Total Class Contact	Total Lab. Contact	Total Contact Hrs/12 Week
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### First three-months (first quarter)

110	Basic Accounting	10	5	5	120
110	Communication	3	3	-	36
110	Basic Mathematics	4	4	-	36
110	Electronic Calculators	4	4	-	48
120	Beginning Typewriting	16	2	14	192
101	English I	6	6	-	72
100	Theology	2	2	-	24

### Second three-months (second quarter)

230	Advanced Typing	16	2	14	192
250	Special Records	4	2	2	48
210	Office Application at Micro computer	4	1	3	48
200	Theology	2	2	-	24
201	English II	6	6	-	72
210	Cooperative Work experience	12	Practice in Gov. offices		

<u>PROGRAM</u>	<u>COURSE</u>	<u>COURSE TITLE</u>	<u>CREDIT TIME</u>
COMM	110	COMMUNICATION	Contact hours: 1st Quarter 72 2nd Quarter 72

Description:

Communication in business involves numerous letters and written reports. Also, much time is involve in oral communication, such as telephone calls, interviews, giving instructions, greeting visitors and working together with other people. The communication process, oral and written involves three levels of effectiveness:

1. Direct face-to-face communications is the most effective because it provides instant feedback and because it permits the use of non-verbal techniques (body expressions) to reinforce the oral message.
2. Indirect two-way communication, such as the telephone offers instant feedback without the non-verbal techniques.
3. One-way communications, such as letters and reports, lack both instant feedback and non-verbal communication use.

The unit will stress upon the students the importance of good communication skills in business regardless of the position in which the person is employed. This unit also provides an overview of the communication skills to be taught in the other eight units. The objectives for the unit are as follows:

1. To show how business demands people who can communicate effectively.
2. To present the different types of communication skills.



ACCT 110

BASIC ACCOUNTING

Contact hours:  
1st quarter 120  
2nd quarter 0

Description:

The students should be able to analyze and complete the bookkeeping cycle and be able to prepare and examine income and expenses and balance sheet statements. The student will also understand and use special journal that are used in the bookkeeping process.

1. The student will be able to use bookkeeping concepts and vocabulary.
2. The student will learn and understand the bookkeeping cycle in double entry bookkeeping.
3. The student will be able to analyze and complete double entry bookkeeping transactions.
4. The student will be able to prepare and examine income and expenses and balance sheet statements.
5. The student will understand the use of subsidiary journals in the bookkeeping process.

MATH 110

BASIC MATHEMATICS

Contact hours:

1st quarter 48

TEXTBOOK: WORKBOOK PREPARED BY MANPOWER SCHOOL

2nd quarter 48

Description:

1. Develop and apply mathematical skills needed to solve mathematical problems.
2. Use elementary algebra and geometry.
3. Use special mathematical skills including percentage, averages, interest, ratios, and metric system.
4. Use whole Numbers, Fractions, and Decimals as follows:

The student will learn to write names for whole numbers.  
The student will learn to solve problems involving addition, subtraction, multiplication, and division.  
The student will write fractional notation for part of an object or part of a set of objects.

The student will convert between fractional notation and mixed numerals.

The student will solve problems involving multiplication division, addition and subtraction of numbers.

The student will convert from decimal to fractional and from fractional to decimal notation.

The student will solve problems involving addition, subtraction, multiplication, and division using decimal notation.

The student will solve problems involving whole numbers.

SECR 110

ELECTRONIC CALCULATORS

Contact hours:  
1st quarter 48  
2nd quarter 0

TEXTBOOK: SOLVING BUSINESS PROBLEMS ON THE ELECTRONIC CALCULATOR. THIRD EDITION, Mildred K. POLISKY.

Description:

1. Develop touch system to operate electric calculators.
2. Perform the four basic mathematical processes of addition, subtraction, multiplication, and division on electronic calculators.
3. Calculate business problems on electronic calculators with speed and accuracy acceptable to an entry level employment.

SECR 120

BEGINNING TYPEWRITING

Contact hours:  
1st quarter 192  
2nd quarter 0

Description:

1. Teach correct keyboarding posture and techniques at the typewriter.
2. Teach correct key reaches for alphabetic, numeric, and symbol keys.
3. Build speed and accuracy in classroom assignments.
4. Teach correct formatting of business letters, memos, tables reports, and other classroom assignments.
5. Teach how to prepare stencils and spirit masters and to duplicate copies from them.
6. Teach proper care of all assigned equipment.
7. Designed to prepare people with vocational skills in typewriting.

SECR 140

RECORD MANAGEMENT

Contact hours:  
1st quarter 48  
2nd quarter 48

Description:

1. The student will understand the role and functions of maintaining a filing system.
2. The student will demonstrate the ability to file and retrieve records using alphabetic, numeric, geographical and subject methods of filing.
3. The student will manage business records effectively.
4. The student will demonstrate knowledge in setting up and evaluating record systems.
5. The student will learn how to develop and maintain effective inventory systems of supplies and equipment.

ENGL 101-201

ENGLISH I  
ENGLISH II

Contact hours:  
1st quarter 72  
2nd quarter 72

Description:

1. How to use verbs "To be" in affirmative sentences.
2. How to make simple present sentences and then change to questions using("do", "he").
3. How to make past tense sentences.
4. To make questions using WH.
5. How to make the present continuous sentences using "ing".
6. How to make future tense sentences using "be+going to", "will", "shall".
7. Use of words like "a", "an", "the" in sentences.
8. Usage of specific pronouns like this, that, these and those.
9. Usage of adverbs in sentences.

SECR 230

ADVANCED TYPEWRITING:

Contact hours:  
1st quarter 0  
2nd quarter 192

Description:

1. Increase speed and accuracy in typewriting
2. Become more proficient in formatting business letters, memos, tables, and reports.
3. Be able to study a typing job and make correct decisions about placement on the typed page.
4. Be able to format and type all forms of business letters with maximum proficiency and attractiveness.

SECR 250

OFFICE PROCEDURES

Contact hours:  
1st quarter 0  
2nd quarter 96

Description:

1. Gain knowledge of how an office goes about gathering, processing, and distributing information.
2. Learn and understand how people must work together in an office setting in order for work to get done.
3. Learn how to develop and use job descriptions and work appraisal sheets to evaluate job performance.
4. Learn the role of the secretary in a present day office setting.
5. Learn the impact of new equipment, technology, and services that are available to the secretary.
6. Learn the increased opportunities and responsibilities for secretaries as their role changes to that of administrative assistant or office manager.
7. Learn to prepare papers, forms, and documents of a quality acceptable for office use.

**Description:**

The students will learn to use microcomputer software representative of programs employed in small businesses and organizations for word processing, database management, and office administration. Emphasis is placed on producing mailable correspondence and properly formatted financial reports and planning documents.

1. Prepare word processing documents using the proper creation, formatting, editing, and printing on the microcomputer.
2. Properly file, retrieve, delete, and copy documents as necessary.
3. Originate lists/documents that will create a .merge list/data file.
4. Originate entries called macros and recall the information into documents.
5. Create documents incorporating pagination, headers, footers, line spacing, global search and replace, and spelling features.
6. Demonstrate knowledge of function keys through written examination and preparation of assigned documents.
7. Format financial reports using spreadsheet software available.
8. Originate, edit, sort, and print data base file.

Description:

Cooperative work experience is a program in which the manpower program and selected employees jointly provide learning experiences to prepare students for the work world. Sometimes these programs involve on-the-job-training where the student receives an additional stipend while in training. In most cases, the work experience is included as part of the student's regular program.

A cooperative work experience has three characteristics; first, the student has completed courses which are based on his employment objectives; second, the student shall be assigned to a cooperative work experience which is based on the same objectives as his in-school program; and third, the student shall receive supervision from both the school and the employer who provides the cooperative work experience. The objectives are:

1. To present, develop, and refine the skills necessary for job competency.
2. To provide a laboratory in which students practice the skills, knowledge, and attitudes learned to make the classroom instruction more meaningful.
3. To provide students an opportunity to develop the ability to work cooperatively with others.
4. To provide students with an opportunity to follow directions and accept supervision.
5. To assist students in developing good work habits and attitudes.
6. To help prepare students for full-time employment after they complete their program.

## II. TRADE SKILLS: (CONSTRUCTION TECHNOLOGY OPTION)

This section is divided into seven sections:

1. Master Mason
2. Masonry
3. Carpentry
4. Electricity
5. Plumbing
6. Steel work
7. Welding

The fundamentals in each of the disciplines provides the core curriculum for the trade skills classes. In addition, mathematics, English language, and theology are taught.



### Course of Studies

Course No	Course Title	Total Contact Hrs/week	Total Class Contact	Lab. Hrs/12	Contact weeks
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#### 1. Master Mason Option

##### First three months (first quarter)

110	Job Site Master	4		-	48
120	Print Reading and Layout	24	4	20	288
190	Math I	4	4	-	48
101	English I	3	3	-	36
100	Theology	2	2	-	24

##### Second three months (Second quarter)

210	Job Site Master	4	4	-	48
220	Print Reading layout	24	4	20	288
290	Math II	4	4	-	48
201	English II	3	3	-	36
200	Theology	2	2	-	24

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Course No	Course Title	Total Contact Hrs/week	Total Class Contact	Total Lab. Contact	Total Contact Hrs/12 weeks
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## 2. Masonry Option:

### First three-months (first quarter)

130	Masonry	30	6	24	360
190	Math I	4	4	--	48
101	English I	3	3	--	36
100	Theology	2	2	--	24

### Second three-months (second quarter)

230	Masonry	30	6	24	360
290	Math II	4	4	--	48
200	Theology	2	2	--	24
201	English II	3	3	--	36

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## 3. Steel Work Option:

### First three-months (first quarter)

140	Building Steel work	30	6	24	360
190	Math I	4	4	--	48
100	Theology	2	2	--	24
101	English I	3	3	--	36

### Second three-months (second quarter)

240	Building Steel work	30	6	24	360
290	Math II	4	4	--	48
200	Theology	2	2	--	24
201	English II	3	3	--	36

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Course No	Course Title	Total Contact Hrs/week	Total Class Contact	Total Lab. Contact	Total Contact Hrs/12 weeks
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#### 4. Welding Option:

##### First three-months (first quarter)

150	Welding	30	6	24	360
190	Math I	4	4	--	48
100	Theology	2	4	--	24
101	English I	3	3	--	36

##### Second three-months (first quarter)

250	Welding	30	6	24	360
290	Math I	4	4	--	48
200	Theology	2	4	--	24
201	English I	3	3	--	36

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#### 5. Carpentry Option:

##### First three-months (first quarter)

160	Carpentry	30	6	24	360
190	Math I	4	4	--	48
100	Theology	2	2	--	24
101	English I	3	3	--	36

##### Second three-months (second quarter)

260	Carpentry	30	6	24	360
290	Math II	4	4	--	48
200	Theology	2	2	--	24
201	English II	3	3	--	36

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Course No	Course Title	Total Contact Hrs/week	Total Class Contact	Total Lab. Contact	Total Contact Hrs/12 weeks
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#### 6. Electricity Option:

##### First three-months (first quarter)

170	Electricity	30	6	24	360
190	Math I	4	4	--	48
100	Theology	2	2	--	24
101	English I	3	3	--	36

##### Second three-months (second quarter)

270	Electricity	30	6	24	360
280	Math II	4	4	--	48
200	Theology	2	2	--	24
201	English II	3	3	--	36

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#### 7. Plumbing Option:

##### First three-months (first quarter)

180	Plumbing	30	6	24	360
190	Math I	4	4	--	48
100	Theology	2	2	--	24
101	English I	3	3	--	36

##### Second three-months (second quarter)

280	Plumbing	30	6	24	360
290	Math II	4	4	--	48
200	Theology	2	2	--	24
201	English II	3	3	--	36

CNST 110

**JOB SITE MASTER**

Contact hours:  
1st quarter 48  
2nd quarter 48

**Description:**

This course is designed to place the student in a supervision setting. Knowledge will be provided in the working of materials and equipment. Safe use and construction of a work platform and scaffolding will be practiced, and practical experience in the supervision field will be supplied. Other areas covered will include estimating, logical construction order, quantity objectives and practical first aid. This will leave the student with an entrance level knowledge and experience of the same.

CNST 120

**PRINT READING AND LAYOUT**

Contact hours:  
1st quarter  
2nd quarter

**Description:**

Students will obtain skills, knowledge and practical experience, to read and put into use information found on a set of prints. The student will gain experience in sketching and drawing of prints, along with the application of the same. Knowledge and skills will then be applied in layout of various buildings on an actual building site.

CNST 130

**MASONRY**

Contact hours:  
1st quarter 48  
2nd quarter

**Description:**

This course is designed to build skills and important knowledge in the masonry field. Proportions and mixing of mortar and care of masonry tools will be underlined. Instruction and practical experience in various brick bonds, leads and stone work will be provided. Training and experience in the mixing and placement of concrete, emphasizing safety throughout will leave the student well equipped to enter the masonry market.

CNST 190

CONSTRUCTION MATHEMATICS I

Contact hours:  
1st quarter 0  
2nd quarter 48

Description:

The student will receive instruction in theory and practical application of basic mathematics and measurements.

CNST 290

CONSTRUCTION MATHEMATICS II

Contact hours:  
1st quarter 360  
2nd quarter 48

Description:

The student will receive instruction in theory and practical application in mathematics, decimal numbers, basic algebra, practical plane geometry and solid figures and geometric construction.

CNST 140

STEEL WORK

Contact hours:  
1st quarter 360  
2nd quarter 360

Description:

This course will provide the student with knowledge and hands on skills in various application of steel reinforcement of recast concrete units. A strong emphasis on safety will be stressed in all areas.

CNST 150

**WELDING AND CUTTING**

Contact hours:  
1st quarter 360  
1st quarter 360

Description:

This course will provide the student with knowledge and hands on skills in welding and preparation of materials. Full instruction will underline the safe use of both gas and electricity to preform various welding tasks. Gas cutting of various steel will be demonstrated and practiced. Also covered in this course will be various welding rod and fluxes used in various welding procedures.

CNST 160

**CARPENTRY**

Contact hours:  
1st quarter 360  
2nd quarter 360

Description:

The students will be provided with knowledge and skills needed to perform functions in roof framing, window and door manufacture and cabinet building. The safe use of hand tools and work platforms will be underlined in this course. The above will supply the student with basic level knowledge and skill.

CNST 170

**ELECTRICITY**

Contact hours:  
1st quarter 360  
2nd quarter 360

Description:

This course will include introduction to electricity theory, sources, laws, circuits, conductors, insulators, transformers and tools. Safe working habits will be underlined throughout this course. Further instruction will include the measurement of electricity through the use of instruments and masters.

CNST 180

**PLUMBING**

Contact hours:  
1st quarter 360  
2nd quarter 360

**Description:**

This course will provide the student with knowledge and practical experience in the following: various types of water systems, waste water systems, application of septic tank, drain systems, venting of waste systems, water pumps and repair of the same. Also included in this course will be introduction to tools and safe use of tools and emphasis on job safety.



### ADVANCE CLASSES:

A group of students with top grades from the graduates of the first cycle are given advance courses of 24 weeks in business programs and construction technology. These classes are a pilot for a possible upgrading of the program to a technical school level.

The courses taught in the advance classes are:

#### I. Business Program:

- Leadership
- Mathematics
- English
- Computer
- Social Structure of Afghanistan
- Theology

#### II. Construction Technology:

- Introduction to Technology
- Mathematics
- Drawing
- Practical and theoretical training in the related area of skill blue printed reading and sites supervision.
- Theology
- English

Class hours and contact hours of these classes are as follows:

# **I. Business Program Option**

Course Title	Total Contact Hrs/week	Total Class Contact	Total Lab. Contact	Total Contact Hhrs/12 week
-----				
First quarter:				
Leadership	6	6	-	72
Mathematics	5	5	-	60
English	6	6	-	72
Computer	6	6	-	72
Social Structure of Afghanistan	6	6	-	72
Theology	1	1	-	12
Second quarter:				
Leadership	6	6	-	72
Mathematics	5	5	-	60
English	6	6	-	72
Computer	6	6	-	72
Social Structure of Afghanistan	6	6	-	72

## II. Construction Technology Option

Course Title	Total Contact Hrs/week	Total Class Contact	Total Lab. Contact	Total Contact Hhrs/12 week
-----				
First quarter:				
Introduction to Technology	4	4	-	48
Mathematics	5	5	-	60
Drawing	3	3	-	36
Practical Training	-	-	-	36
Theology	1	1	-	12
English	1	1	-	12
Second quarter:				
Introduction to Technology	4	4	-	48
Mathematics	5	5	-	60
Drawing	3	3	-	36
Practical Training Site Supervision	3	-	3	36
Theology	2	2	-	24
English	6	6	-	72

## LEADERSHIP

Contact hours:  
1st quarter 72  
2nd quarter 72

### Description:

1. Review of Writing Skills presented in Communication course:
  - Applying basic writing Skills
  - Outlining a report
2. Prearrange Business Letters:
  - Acceptable forms of writing letters and memorandum both in Dari and English
  - Responding in English-Dari to letters
3. Preparing Reports:
  - Purpose of reporting
  - Essential procedures when preparing reports
  - Outlining formats
4. Human Relations:
  - Fundamentals of Human Relations
  - Personal and career Development
  - Human Motivation, Job performance and Morale, personal problems.
  - Inter Personal communication
  - Organizational communication
  - Leadership
  - Human Behavior and Training
  - Performance Appraisals
  - Innovation and creativity, Making decision
  - Inter cultural Relations
5. Supervisory Skills:
  - Supervisory Roles of Management
  - Supervisor and Management
  - Exercising control and solving problems
  - Organizing
  - Handling complaints
  - Improving quality of performance
  - Controlling costs and Budget
  - Employee staff and the project manager
  - Management Personality and personal Development portfolio

## **MATHEMATICS**

5 Contact hrs/week

Total of 60 hrs.

### Technical Mathematics II.

#### Description:

1. Identify fundamental law of algebra including to add, subtract, multiply and divide positive and negative real numbers, and polynomials
2. Simplify scientific notation, roots and radicals, formula and tutorial equations, binomial factoring, and solving various geometric formulas;
3. Convert and analyze functions and solving by graphically, linear equation, and quadratic equations

### Technical Mathematics III.

#### Description:

5 contact hrs/week

Total of 60 hrs

1. Verify the trigonometric functions angles, degrees, radian and definitions.
2. Application of right triangles.
3. Preforms trig. functions of any angle and application of radiance
4. Application of vectors and oblique triangle components, the law of sines, the law of cosines, and applications
5. Graphs of trig. functions

## SOCIAL STRUCTURE OF AFGHANISTAN

Contact hours:  
1st quarter 72  
2nd quarter 72

### Description:

1. A review of the History of the region and its significance of on the social structure of Afghanistan.
2. A review of the History of Afghanistan.
3. Contemporary Afghanistan-recent development and social institutions.
4. Current problems-Rehabilitation alternatives.

## ENGLISH

Contact hours:  
1st quarter 72  
2nd quarter 72

### Description:

Main content of the course:

1. Grammar Objectives:
  - Verbs
  - Questions
  - Adverbs
  - Tenses
  - Affirmative and Negative
  - Usage of proposition
2. Reading, speaking and writing it intermediate level.

## COMPUTER

Contact hours:  
1st quarter 72  
2nd quarter 72

### Description:

#### First Quarter:

The students will learn to use microcomputer, creating spreadsheets, and properly formatted financial reports, payable and payroll transactions. The students also will learn saving, editing, displaying, sorting, copying, printing and saving arithmetic symbols in Lotus 123 Program.

#### Second Quarter:

The students will learn to use microcomputer, creating, saving, displaying, editing, sorting and printing database, format, report, query, label and view files. The students will learn using dot prompt in dBase program and dBase programing.

## INTRODUCTION TO TECHNOLOGY

Contact hours:  
96 hours in 24 weeks

### Description:

1. Systems of Units- Metric and English + local
2. Calculating Density, forces and their components
3. Analysis of force on inclined planes. fractions
4. Laws of motions, (Newton Laws)
5. Concept of moment, work, energy (Kinetic to potential), and power
6. Basic machines- Types and applications calculating off. Mech. advantages
7. Basic Hydraulics- various hydraulic Machinery breakers, Hys. press, Hy jacks and crane + tractor. and Bulldozers, Mechanisms.
8. Measurement Instruments, in Metal works. carpentry, machine shops, electrical shops (calipers. vernier, micrometer-metering)

## TECHNICAL DRAWING

Contact hours:  
72 in 6 months

### Description:

1. Teaching the languages of the engineers, Instrumental Drawing, typical equipments in Tech. Drawing. Lettering, Geometric construction Sketching and shope Description.
2. Multi view projection, sectional views. Auxiliary view, and Resolutions Dimensioning, working drawing. and practical Projects related to various professionals.



## SITE SUPERVISION AND BLUE PRINT READING

Contact hours:  
1st quarter 36  
2nd quarter 36

### Description:

1. Blue print Reading:
  - Main Elements of Blue prints
  - Construction Drawings-A complete set of blue prints
  - Construction technical drawings
2. Construction site supervision:
  - Safety and controlling of workers
  - Technical follow up on the site
  - Reporting and implementation program
  - Material estimation and cost estimation
  - Basics of surveying constructional sites.
  - Leveling construction site
  - layout